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COMRADE: A Productivity and Selfcare Website

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Abstract: With the growing world and increasing opportunities, mental health issues have become a major challenge, affecting the productivity. Hence, in this world where technology has become our shadow, we give our attempt here to help beat this by building an application 'Comrade'. This is basically an application that will focus on bringing the various patterns of mood swings to the user's attention and will provide an assistance to combat procrastination. Comrade will not only help to track the mood changes and analyse it, but also assist the productivity and focus.

I. INTRODUCTION

Human mind is considered to be the greatest enigma, which has been a driving force behind many scientific endeavours, leading to the various theories associated with its working. With the growing world, increasing opportunities and reaching various heights the humans have been able to achieve - we tend to lose our touch upon the cognitive, behavioral and emotional well being, which is generally referred to as Mental health.

This particular topic is being highlighted more than ever in recent times because of the drastic changes the human being has been adapting to since a couple of years with the entire developmental surge across the globe, not forgetting the "pandemic". The past 2 years have been extremely crucial to the entire mankind and handling everything has been a real task.

With the issues of health (primarily) and employment, men-tal well being has come across to be a luxury in these tough times. It can affect daily living, relationships and physical health as well. Apart from that, one of the most common concerns has been 'productivity'.

It is not easy to keep going during such adverse conditions. No motivation, procrastination, etc has affected the productive capabilities in some or the other way, and hence in this world where technology has become our shadow, we give our attempt here to help beat this by building an application 'Comrade'.

II. RESEARCH METHODOLOGY

The first step is to identify issues and/or opportunities for collecting data and to research the interest of the users. This research include gathering primary data that refers to the first hand data which includes talking to people and gathering secondary data which includes articles, research papers, socialmedia monitoring and other resources.

The goal of the project is to track and remedy any mental health problem before it gets too serious and also to increase the focus of the user. The users could set goals, thereby taking small steps to achieve major differences in their daily lifestyles leading to better productivity.

III. LITERATURE SURVEY

The application and its impact we intend to make necessarily requires two approaches to go ahead with the work- Findings and Outcomes and Comparison. The former primarily talks about the learning we picked from the various research papers and articles we went through, and the later is a study we conducted to compare the existing products falling under similar field of interest.

A. Findings and Outcomes

The primary interest of Comrade is to impart the sense/feeling of well-being. This is closely linked with the mental health, moods, habits, behaviours, etc. Through the papers we referred to, we tried to cover the entire umbrella of topics underlying.

1) *Top ways to increase productivity; Maintaining a healthy balance in life helps efficiency, Are productivity apps more hype than help? (2015, October 19). BBC News.*

Here, what we picked was that the human mind and brain are not made for heavy-duty multitasking. It is suggested to keep track of how much time you devote to certain tasks everyday and perform the physical task of jotting things down. Hence, we implemented a feature which would help the user have a clear idea of how much time is required, left and utilized while completing tasks for the day.

- 2) *Match Your Productivity Approach to the Way You Work*, M, K., NC, R., Isaac, O., Harish, K. S., Iqbal, M. I., Srivastava, K. (2021). *STUDY ONEFFECT OF MEDITATION ON INDIVIDUAL'S PERFORMANCE AT WORKPLACE. International Journal of Management (IJM)*, 12(1), 379–389.

What we essentially picked here is that people have different productivity styles. Some people prefer timing how long tasks take and others prefer flexibility and variety in their schedule.

This brings you to our motive behind not sticking to a particular strict method for the user to follow. Focusing on one type of productivity style will limit the audience the Comrade app attracts.

- 3) *Evaluating online stress management intervention for college students*, Frazier, P., Meredith, L., Greer, C., Paulsen, J. A., Howard, K., Dietz, L. R., Qin, K. (2015). *Randomized controlled trial evaluating the effectiveness of a web-based stress management pro- gram among community college students. Anxiety, Stress, Coping*, 28(5), 576–586.

This article talks about a correlation between lower levels of depression, stress and anxiety with the element of control.

Through Comrade the users will be made aware of the various steps/measures/ways which are helping them get over the low phase thus helping them to monitor and track their mood over the time.

- 4) *Understanding People's Use of and Perspectives on Mood-Tracking Apps: Interview Study*, Corpus ID: 236997578, S. Schueller, Martha Neary, +1 author Daniel A. Epstein Published 3 April 2021 *Medicine JMIR Mental Health*

Mood is not a behavior, rather it is a bodily and cognitive experience encompassing both physiological reactions and thoughts. Accordingly, people may not have direct control over their mood and might be interested in understanding why certain mood states occur. This might hold some similarity to other bodily or cognitive experiences people track including chronic health conditions. Here, Comrade will assist the user in tracking their moods as well as the measures they took to fix it.

- 5) *The Pomodoro Technique for Sustainable Pace in Extreme Programming Teams*, DOI:10.1007/978-3- 540-68255-4 18, Federico Gobbo, Matteo Vaccari, June 2008

The Pomodoro Technique is a time management method developed by Francesco Cirillo in the late 1980s. It uses a timer to break work into intervals, typically 25 minutes in length, separated by short breaks. The pomodoro technique increases focus immensely when prescribed correctly. In turn, this leads to an increase in work turnover and a boost in quality. Yep, that is right, more work, better quality, all with the same amount of hours in a day. Realising its impact and importance, one of the most important features of Comrade is Pomodoro.

- 6) *Sentimental Analysis using Logistic Regression*, DOI:10.9790/9622-1107023640, Subhani Shaik Published July 2021 *International Journal of Engineering Research and Applications*

Logistic Regression is a classification that serves to solve the binary classification problem. Estimation is made by applying binary classification with Logistic Regression on the data allocated to training and test data in a data set. Sensitivity Analysis is a method used to judge some-one's feelings or make sense of their feelings according to a certain thing. It is basically a text processing process and aims to determine the class that the given text wants to express emotionally. Sentiment analysis can be used to analyze web material from social media platforms, online products, companies, events, and personnel. The idea here in Comrade is to divide the training set into positives and negatives.

B. Comparison

The next step for us was to conduct a study to understand the existing market existing on the similar lines. For the same we compared 6 applications with Comrade and drew a few difference lines

- 1) *Todoist*: It's a to-do list application which keeps a track of other apps in use too, creates to-do lists for individuals and group them into sub-tasks. It charges the user on a 3 dollar/month basis and doesn't provide any timer feature.
- 2) *TickTick*: It shows an Achievement score by the task completed in the allotted time. It owns the databases and all rights to the application. View your tasks in smart lists or create your own custom smart lists. There are 2 versions - free and premium (costs 27.99 dollars/year). This makes use of the pomodoro technique.
- 3) *Sober Time*: It's a mental health app that tracks sobriety down and updates in real-time and tracks your relapses. Each goal is tracked and you'll get a notification when you've reached one. Free to download and use, but has too many advertisements included. It's a free application to use and has no pomodoro timer technique.

- 4) *Serene*: It comes with a built-in website and app blocker. It keeps a track of all the other apps in use. Serene will only block the sites and apps during your scheduled sessions. There are 2 versions - free and premium (costs 49 dollars/year). It blocks access to other apps - which may lead to missing urgent calls, etc. Doesn't make use of pomodoro technique.
- 5) *COMRADE*: When compared to other applications, the biggest USP of this website is that under one platform the user can make use of the mood tracker and utilise the productivity tools to enhance the efficiency. Comrade won't keep a track of your other apps and online activity. Comrade limits the amount of time you spend on a task by setting a time goal. It costs nothing to find out. The user can set work time and interval break time via pomodoro timer.

IV. SCOPE OF THE PROJECT

- 1) We wish to make the user experience better as far as visuals are concerned.
- 2) Display of the corresponding journal entry - as the date and rating.
- 3) In future, given the time and skill-set, we may try connecting the users with their health professionals (if any) and make a provision to share the updates regarding their daily monitoring.

V. TECH-STACK USED

A. Figma

It is a web-based graphic editing and user interface de-signing software. We used figma to design the interface of our project. It was later easier for us to implement these designed interfaces for our website.

B. Visual studio code

Visual Studio Code is a source-code editor which is made by Microsoft for Windows, Linux and macOS. Its features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

C. Angular CLI

We have used angular as the frontend of our project. Angular framework includes JavaScript, HTML and CSS which help to develop the frontend of the project.

D. Firebase

Firebase is a nosql database software. It enables us to store and sync data at global scale. The data is stored as JSON and synchronized in realtime to every connected client.

E. Github

We used github to commit i.e, to record the changes in the repository of our project. We were also able to push and pull the project from github.

The workflow of our project is given below:

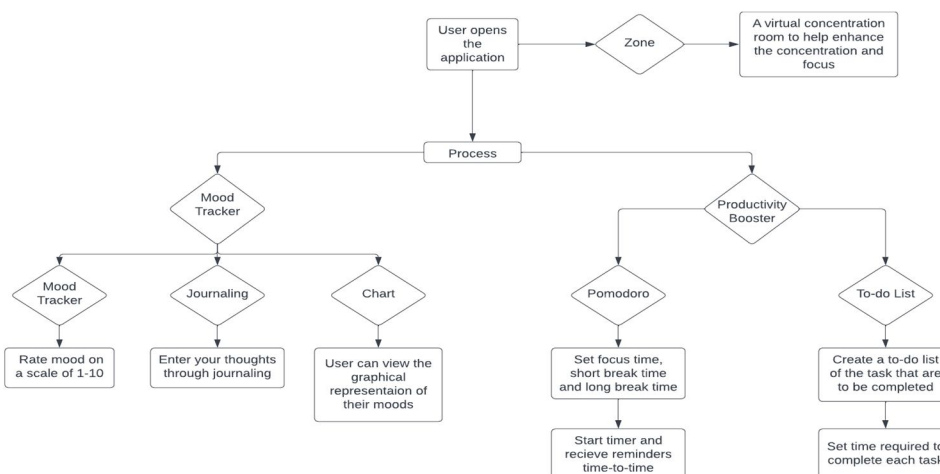


Fig. 1. Flow Chart

Following are the screenshots of our project:

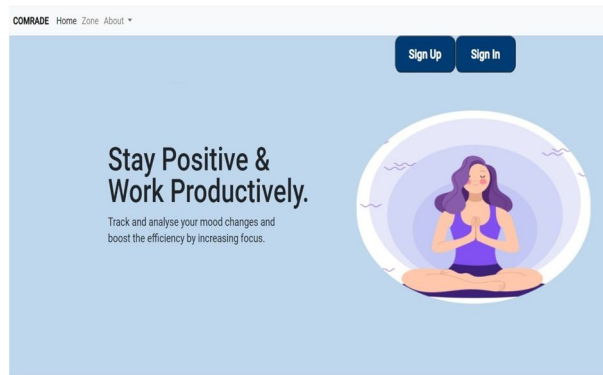


Fig. 2. Home Page

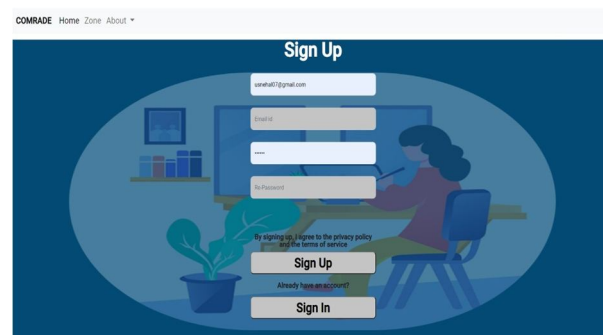


Fig. 3. Sign Up

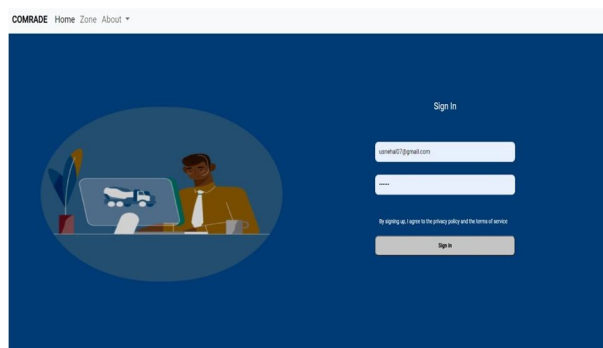


Fig. 4. Sign In

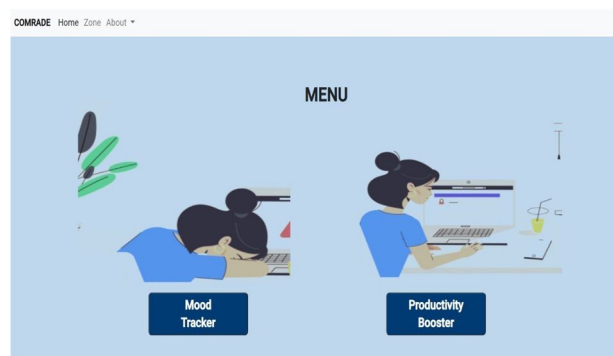


Fig. 5. Menu

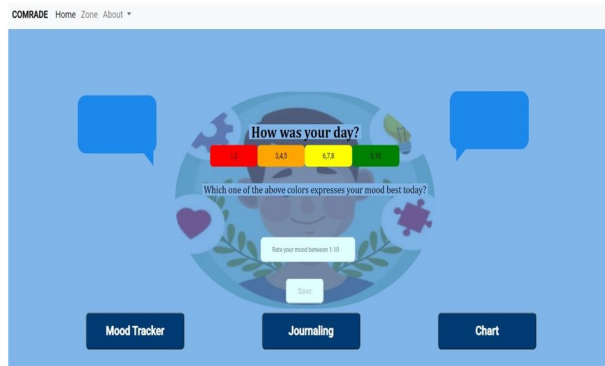


Fig. 6. Mood Tracker

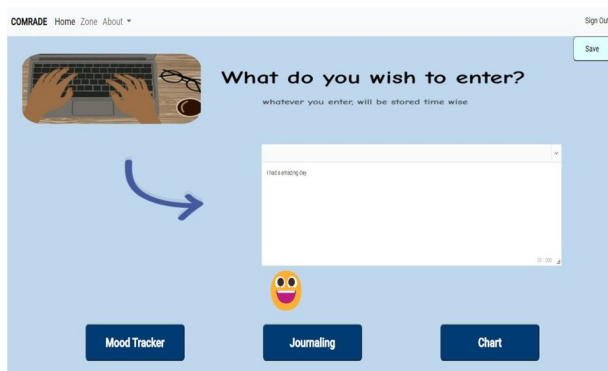


Fig. 7. Journaling

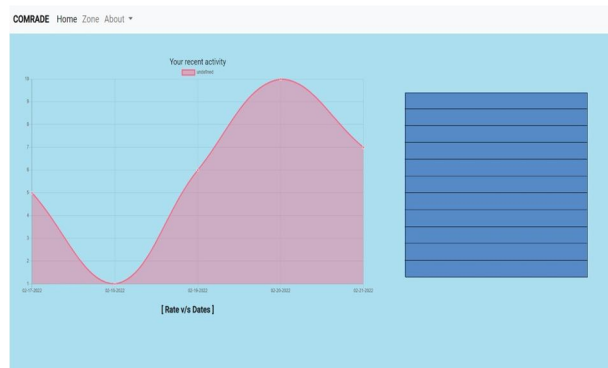


Fig. 8. Chart

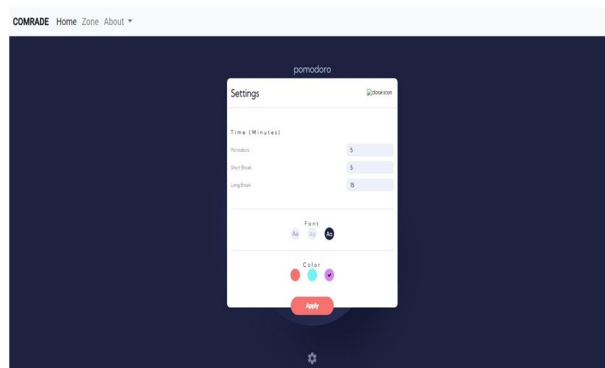


Fig. 9. Pomodoro

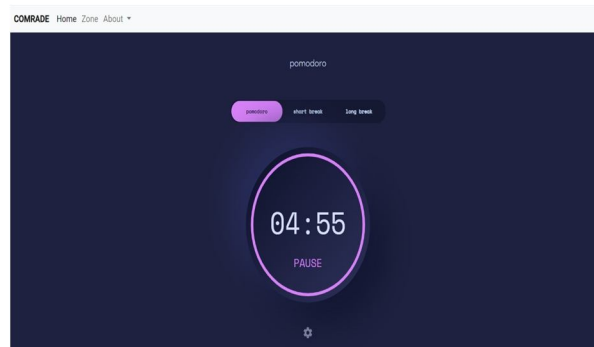


Fig. 10. Pomodoro



Fig. 11. To-Do list

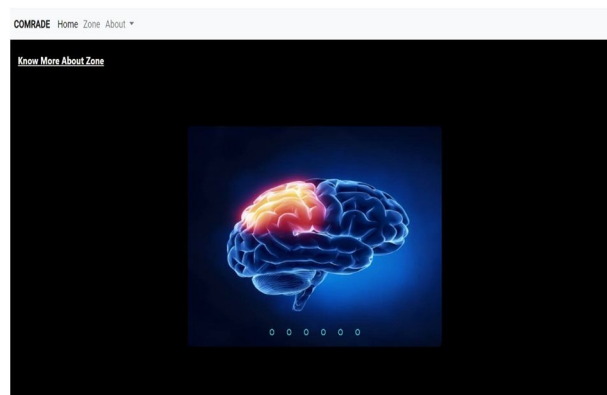


Fig. 12. Zone

VI. CONCLUSION

- 1) We have implemented a platform which takes input from the user, analyses it using ML, displays a chart for the user to get an overview for their past 30 days activity.
- 2) We have also incorporated productivity enhancing techniques which have been picked from research papers we referred during the research process.
- 3) In future, with appropriate duration of time and skillset incorporation of a dashboard for connect with the individual therapist can take place.

VII. ACKNOWLEDGEMENT

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